

Intersection LOS Summary

AM Peak - Unconstrained Models

Node #	Intersection	Control Type	2017-AM		2021-AM						2026-AM					
			Existing		No Build		Partial Build		Full Build		No Build		Partial Build		Full Build	
			Delay(s/veh)	LOS	Delay(s/veh)	LOS	Delay(s/veh)	LOS	Delay(s/veh)	LOS	Delay(s/veh)	LOS	Delay(s/veh)	LOS	Delay(s/veh)	LOS
1	Stonebrook Parkway	Signalized	67.9	E	88.6	F	64.7	E	68.1	E	109.6	F	100.9	F	104.6	F
2	Academy Dr	Signalized	21.4	C	15.6	B	18.4	B	10.9	B	35.0	D	20.2	C	11.3	B
3	Allen School Drive	Signalized	13.4	B	13.7	B	13.4	B	11.2	B	31.9	C	14.3	B	12.0	B
4	Lebanon Road	Signalized	65.0	E	125.6	F	97.8	F	103.1	F	165.4	F	105.0	F	109.2	F
5	Lakehill Boulevard	Signalized	29.8	C	58.2	E	23.4	C	29.2	C	108.3	F	49.3	D	35.7	D
6	Warren Parkway	Signalized	23.7	C	42.7	D	26.8	C	30.3	C	61.6	E	49.6	D	43.4	D
7	Legacy Car Wash Driveway	Unsignalized	1.6	A	14.6	B	6.8	A	1.2	A	24.3	C	8.9	A	3.4	A
8	Boyd Office Driveway	Unsignalized	2.3	A	15.9	C	7.0	A	0.6	A	29.6	D	12.0	B	2.6	A
9	Baylor Rehabilitation Driveway	Unsignalized	5.0	A	16.0	C	5.3	A	1.2	A	30.6	D	10.4	B	2.4	A
10	Stonebriar Drive	Signalized	15.1	B	25.9	C	14.3	B	12.3	B	49.9	D	29.8	C	14.8	B
11	Wendover Drive	Unsignalized	13.2	B	34.7	D	3.1	A	0.6	A	48.6	E	11.5	B	0.7	A
12	Travis Drive	Unsignalized	7.3	A	17.9	C	1.6	A	0.2	A	22.7	C	10.3	B	0.3	A
13	Donley Drive	Unsignalized	11.2	B	23.9	C	1.0	A	0.4	A	29.0	D	9.8	A	0.5	A
14	Foard/Driveway	Unsignalized	13.8	B	25.8	D	1.2	A	0.5	A	29.5	D	7.7	A	0.5	A
15	Country Club Drive	Unsignalized	13.2	B	22.3	C	2.2	A	0.8	A	25.0	D	9.3	A	1.4	A
16	Stonebriar Way	Unsignalized	17.4	C	27.9	D	3.7	A	3.0	A	37.6	E	8.7	A	4.9	A
17	Town and Country Boulevard	Signalized	34.6	C	42.7	D	17.8	B	12.5	B	43.3	D	23.2	C	15.5	B
18	Median Opening -12	Unsignalized	20.9	C	32.0	D	24.2	C	16.1	C	31.2	D	26.6	D	20.7	C

Notes:

1. VISSIM does not directly compute the HCM level of service.
2. The Delay for the link segments is the average of 10 simulation runs in VISSIM.
3. The Delay obtained from VISSIM is compared to the following tables to obtain LOS
 Signalized Intersections - Exhibit 18-4 LOS Criteria (Page 18-6, HCM 2010)
 Unsignalized Intersections - Exhibit 19-1 LOS Criteria (Page 19-2, HCM 2010); Exhibit 20-2 LOS Criteria (Page 20-3, HCM 2010)
4. Microscopic simulation models with significant number of underserved intersections can result in unexpected and unrealistic MOEs. Eg, 2026 intersections might show better LOS due to the underserved vehicles at multiple locations.

Intersection LOS Summary

PM Peak - Unconstrained Models

Node #	Intersection	Control Type	2017-PM		2021-PM						2026-PM					
			Existing		No Build		Partial Build		Full Build		No Build		Partial Build		Full Build	
			Delay(s/veh)	LOS	Delay(s/veh)	LOS	Delay(s/veh)	LOS	Delay(s/veh)	LOS	Delay(s/veh)	LOS	Delay(s/veh)	LOS	Delay(s/veh)	LOS
1	Stonebrook Parkway	Signalized	41.3	D	45.2	D	60.7	E	62.3	E	55.3	E	81.9	F	84.3	F
2	Academy Dr	Signalized	2.0	A	7.1	A	6.8	A	9.5	A	13.3	B	9.5	A	11.5	B
3	Allen School Drive	Signalized	7.9	A	11.5	B	9.4	A	10.8	B	12.3	B	10.7	B	11.8	B
4	Lebanon Road	Signalized	49.8	D	63.9	E	62.8	E	70.8	E	142.6	F	149.8	F	142.9	F
5	Lakehill Boulevard	Signalized	19.9	B	21.1	C	8.5	A	12.4	B	67.3	E	14.9	B	20.7	C
6	Warren Parkway	Signalized	27.4	C	133.7	F	79.3	E	66.9	E	158.5	F	96.5	F	89.5	F
7	Legacy Car Wash Driveway	Unsignalized	1.8	A	14.7	B	7.4	A	7.6	A	21.0	C	8.4	A	10.1	B
8	Boyd Office Driveway	Unsignalized	0.8	A	15.8	C	7.4	A	4.0	A	21.6	C	11.1	B	8.2	A
9	Baylor Rehabilitation Driveway	Unsignalized	1.0	A	20.7	C	8.1	A	3.0	A	23.0	C	12.9	B	7.6	A
10	Stonebriar Drive	Signalized	11.7	B	34.8	C	17.6	B	9.4	A	38.7	D	26.9	C	19.0	B
11	Wendover Drive	Unsignalized	1.0	A	38.3	E	5.5	A	0.9	A	44.1	E	8.8	A	4.1	A
12	Travis Drive	Unsignalized	0.5	A	19.9	C	5.1	A	0.4	A	18.9	C	8.0	A	3.0	A
13	Donley Drive	Unsignalized	0.7	A	25.1	D	5.2	A	0.7	A	25.3	D	7.8	A	2.6	A
14	Foard/Driveway	Unsignalized	0.5	A	25.7	D	4.7	A	0.5	A	25.6	D	6.3	A	1.8	A
15	Country Club Drive	Unsignalized	1.1	A	23.0	C	7.4	A	1.3	A	27.8	D	10.3	B	3.4	A
16	Stonebriar Way	Unsignalized	1.1	A	24.6	C	8.7	A	5.3	A	25.8	D	11.1	B	7.3	A
17	Town and Country Boulevard	Signalized	16.0	B	67.1	E	33.4	C	22.0	C	68.8	E	42.5	D	23.5	C
18	Median Opening -12	Unsignalized	4.1	A	26.6	D	15.8	C	6.0	A	26.1	D	17.7	C	8.0	A

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Intersection LOS Summary

AM and PM Peak - Unconstrained Models

Node #	Intersection	Control Type	Existing-AM		No Build -AM				Partial Build -AM				Full Build -AM			
					2021		2026		2021		2026		2021		2026	
			Delay(s/veh)	LOS	Delay(s/veh)	LOS	Delay(s/veh)	LOS	Delay(s/veh)	LOS	Delay(s/veh)	LOS	Delay(s/veh)	LOS	Delay(s/veh)	LOS
1	Legacy Car Wash Driveway	Unsignalized	20.4	C	225.4	F	464.5	F	42.6	E	49.5	F	13.6	B	24.6	C
2	Boyd Office Driveway	Unsignalized	17.2	C	334.4	F	700.8	F	157.2	F	344.1	F	12.0	B	51.6	F
3	Baylor Rehabilitation Driveway	Unsignalized	47.9	E	171.6	F	466.8	F	27.7	D	41.8	F	14.1	B	29.2	D
4	Wendover Drive	Unsignalized	32.0	D	278.0	F	659.3	F	32.5	D	122.5	F	13.7	B	19.8	C
5	Donley Drive	Unsignalized	277.1	F	328.7	F	1843.8	F	29.3	D	126.5	F	9.0	A	15.3	C
6	Country Club Drive	Unsignalized	100.7	F	135.9	F	208.9	F	26.1	D	87.5	F	11.7	B	16.8	C
7	Stonebriar Way	Unsignalized	99.9	F	173.1	F	484.8	F	30.7	D	58.6	F	15.2	C	29.9	D

Node #	Intersection	Control Type	Existing-PM		No Build -PM				Partial Build -PM				Full Build -PM			
					2021		2026		2021		2026		2021		2026	
			Delay(s/veh)	LOS	Delay(s/veh)	LOS	Delay(s/veh)	LOS	Delay(s/veh)	LOS	Delay(s/veh)	LOS	Delay(s/veh)	LOS	Delay(s/veh)	LOS
1	Legacy Car Wash Driveway	Unsignalized	19.2	C	273.1	F	726.2	F	63.4	F	95.6	F	30.7	D	49.9	E
2	Boyd Office Driveway	Unsignalized	19.4	C	120.4	F	308.7	F	101.8	F	320.0	F	21.3	C	51.7	F
3	Baylor Rehabilitation Driveway	Unsignalized	20.6	C	152.9	F	597.7	F	103.9	F	304.4	F	33.3	D	41.1	E
4	Wendover Drive	Unsignalized	24.1	C	773.3	F	1176.2	F	103.1	F	204.2	F	37.4	E	58.1	F
5	Donley Drive	Unsignalized	27.5	D	975.2	F	1765.2	F	101.7	F	173.6	F	38.2	E	47.8	E
6	Country Club Drive	Unsignalized	23.6	C	140.9	F	377.2	F	116.3	F	175.1	F	27.0	D	45.3	E
7	Stonebriar Way	Unsignalized	24.9	C	203.3	F	324.0	F	60.1	F	166.8	F	44.6	E	73.3	F

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Intersection Volumes Comparison

AM Peak - Unconstrained Models

Node #	Intersection	Control Type	Year 2021				Year 2026					
			Demand Volumes	Partial Build Year		Full Build Year		Demand Volumes	Partial Build Year		Full Build Year	
				Served Volumes	% Difference	Served Volumes	% Difference		Served Volumes	% Difference	Served Volumes	% Difference
1	Stonebrook Parkway	Signalized	4520	4292	-5%	4291	-5%	4900	4493	-8%	4505	-8%
2	Academy Dr	Signalized	3130	2984	-5%	2998	-4%	3430	3207	-7%	3259	-5%
3	Allen School Drive	Signalized	3080	2890	-6%	2920	-5%	3360	3111	-7%	3177	-5%
4	Lebanon Road	Signalized	6690	6144	-8%	6163	-8%	7320	6501	-11%	6576	-10%
5	Lakehill Boulevard	Signalized	4460	4134	-7%	4159	-7%	4830	4365	-10%	4432	-8%
6	Warren Parkway	Signalized	5670	5241	-8%	5285	-7%	6170	5485	-11%	5703	-8%
7	Legacy Car Wash Driveway	Unsignalized	4050	3732	-8%	3785	-7%	4430	3913	-12%	4149	-6%
8	Boyd Office Driveway	Unsignalized	4050	3741	-8%	3792	-6%	4430	3922	-11%	4158	-6%
9	Baylor Rehabilitation Driveway	Unsignalized	4050	3767	-7%	3807	-6%	4430	3941	-11%	4179	-6%
10	Stonebriar Drive	Signalized	4180	3901	-7%	3921	-6%	4600	4099	-11%	4334	-6%
11	Wendover Drive	Unsignalized	3950	3686	-7%	3668	-7%	4340	3848	-11%	4055	-7%
12	Travis Drive	Unsignalized	3920	3666	-6%	3635	-7%	4310	3838	-11%	4020	-7%
13	Donley Drive	Unsignalized	3940	3707	-6%	3670	-7%	4350	3892	-11%	4052	-7%
14	Foard/Driveway	Unsignalized	3930	3681	-6%	3646	-7%	4340	3879	-11%	4028	-7%
15	Country Club Drive	Unsignalized	3990	3755	-6%	3723	-7%	4410	3991	-10%	4118	-7%
16	Stonebriar Way	Unsignalized	4010	3793	-5%	3780	-6%	4460	4079	-9%	4182	-6%
17	Town and Country Boulevard	Signalized	4250	4034	-5%	4044	-5%	4710	4333	-8%	4426	-6%
18	Median Opening -12	Unsignalized	3700	3478	-6%	3518	-5%	4130	3798	-8%	3885	-6%

Intersection Volumes Comparison

PM Peak - Unconstrained Models

Node #	Intersection	Control Type	Year 2021				Year 2026					
			Demand Volumes	Partial Build Year		Full Build Year		Demand Volumes	Partial Build Year		Full Build Year	
				Served Volumes	% Difference	Served Volumes	% Difference		Served Volumes	% Difference	Served Volumes	% Difference
1	Stonebrook Parkway	Signalized	5230	4963	-5%	4991	-5%	5580	5161	-8%	5185	-7%
2	Academy Dr	Signalized	3450	3229	-6%	3260	-6%	3720	3385	-9%	3426	-8%
3	Allen School Drive	Signalized	3520	3283	-7%	3316	-6%	3770	3431	-9%	3471	-8%
4	Lebanon Road	Signalized	8360	7911	-5%	7978	-5%	9130	8323	-9%	8398	-8%
5	Lakehill Boulevard	Signalized	5070	4684	-8%	4855	-4%	5420	4830	-11%	4979	-8%
6	Warren Parkway	Signalized	6530	6000	-8%	6225	-5%	7010	6153	-12%	6344	-10%
7	Legacy Car Wash Driveway	Unsignalized	5120	4615	-10%	4838	-6%	5440	4762	-12%	4950	-9%
8	Boyd Office Driveway	Unsignalized	5110	4629	-9%	4872	-5%	5430	4766	-12%	4982	-8%
9	Baylor Rehabilitation Driveway	Unsignalized	5120	4658	-9%	4895	-4%	5450	4786	-12%	5027	-8%
10	Stonebriar Drive	Signalized	5390	4897	-9%	5136	-5%	5800	5061	-13%	5340	-8%
11	Wendover Drive	Unsignalized	5160	4696	-9%	4923	-5%	5530	4807	-13%	5120	-7%
12	Travis Drive	Unsignalized	5140	4690	-9%	4914	-4%	5510	4796	-13%	5117	-7%
13	Donley Drive	Unsignalized	5170	4727	-9%	4952	-4%	5560	4840	-13%	5165	-7%
14	Foard/Driveway	Unsignalized	5160	4720	-9%	4935	-4%	5550	4829	-13%	5162	-7%
15	Country Club Drive	Unsignalized	5230	4818	-8%	5021	-4%	5650	4949	-12%	5292	-6%
16	Stonebriar Way	Unsignalized	5200	4815	-7%	5022	-3%	5600	4945	-12%	5308	-5%
17	Town and Country Boulevard	Signalized	5330	4968	-7%	5174	-3%	5700	5082	-11%	5454	-4%
18	Median Opening -12	Unsignalized	3860	3743	-3%	3870	0%	4180	3840	-8%	4096	-2%



NB										
	Stonebrook		Lebanon		Warren		Stonebriar Drive		T&C	Total (T&C to Stonebrook)
Distance (miles)		1.35		0.7		0.4		0.8		
Existing	184	03:54	473	01:33	696	01:13	784	01:14		07:54
NoBuild 2021	308	04:02	549	01:30	731	01:18	1381	01:19		08:09
Partial Build 2021	334	03:42	573	01:23	791	01:11	1529	01:33		07:49
Full Build 2021	345	03:48	582	01:34	813	00:49	1569	01:14		07:24
NoBuild 2026	331	04:03	595	01:34	803	01:32	1446	01:52		09:01
Partial Build 2026	362	03:52	623	01:24	856	01:16	1589	03:11		09:43
Full Build 2026	390	03:56	669	01:39	965	00:52	1795	01:15		07:41
SB										
	Stonebrook		Lebanon		Warren		Stonebriar Drive		T&C	Total (Stonebrook to T&C)
Distance (miles)		1.35		0.7		0.4		0.8		
Existing	702	04:28	920	01:55	1744	01:03	1600	03:24		10:50
NoBuild 2021	683	05:05	702	02:54	1265	02:10	1354	06:25		16:34
Partial Build 2021	724	04:20	844	01:41	1538	00:41	1586	01:29		08:11
Full Build 2021	720	04:17	830	01:46	1529	00:45	1560	01:22		08:11
NoBuild 2026	665	07:14	634	05:08	1142	03:14	1297	07:39		23:15
Partial Build 2026	802	04:23	888	02:34	1602	00:42	1625	01:24		09:02
Full Build 2026	803	04:17	876	01:56	1600	00:45	1625	01:29		08:27
xxx	-Vehicles for the travel time segment									



NB										
	Stonebrook		Lebanon		Warren		Stonebriar Drive		T&C	Total (T&C to Stonebrook)
Distance (miles)		1.35		0.7		0.4		0.8		
Existing	771	02:40	1017	01:24	1863	00:59	1621	01:21		06:25
NoBuild 2021	959	02:45	1249	01:36	1764	01:16	2003	01:51		07:28
Partial Build 2021	1134	03:21	1492	01:43	2070	01:39	2376	02:09		08:52
Full Build 2021	1157	03:28	1542	02:03	2219	01:30	2582	01:16		08:18
NoBuild 2026	978	02:50	1259	02:02	1850	01:10	2020	01:21		07:23
Partial Build 2026	1138	03:25	1482	02:39	2090	01:51	2329	02:39		10:34
Full Build 2026	1185	03:31	1542	02:41	2210	01:54	2562	01:40		09:45
SB										
	Stonebrook		Lebanon		Warren		Stonebriar Drive		T&C	Total (Stonebrook to T&C)
Distance (miles)		1.35		0.7		0.4		0.8		
Existing	279	04:44	425	01:06	799	00:41	813	01:17		07:48
NoBuild 2021	302	03:50	386	02:34	935	03:13	1301	07:14		16:52
Partial Build 2021	293	04:19	416	02:10	1028	00:52	1326	01:40		09:02
Full Build 2021	293	04:19	415	02:02	1022	00:43	1344	01:36		08:40
NoBuild 2026	335	04:07	377	05:32	898	04:22	1241	08:17		22:18
Partial Build 2026	329	04:44	442	02:16	1112	00:54	1399	01:38		09:31
Full Build 2026	333	04:13	454	02:03	1111	00:43	1410	01:42		08:41
xxx	-Vehicles for the travel time segment									